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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,865	12/17/2001	W. Eli Strich	QCPA113B1C1	3128

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EXAMINER	
TORRES, JUAN A	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,865	STRICH ET AL.	
	Examiner	Art Unit	
	Juan A. Torres	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 06/04/2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Those documents have not been found in the parent case.

Drawings

The drawings are objected to because:

a) In figure 3 blocks 68 and 70 are missing (see figure 3 in US6473447).

b) In figure 4 blocks 11A-114B, 116A-116B, 104A-104B and 106A-106B are missing (see figure 3 in US6473447).

c) In figure 6 the amplifiers 254-256 are in the opposite direction, figure 6 is a receiver (see LNA amplifiers 220 in the same figure), so amplifiers 254-256 should be in the same direction than amplifiers 220.

d) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "347" and "348" (see figure 8).

e) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the

description: "502" (see figure 16. It seems that reference character "502 in figure 16 should be "501", see page 25 line 26 of the specification).

f) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "100" (see page 15 lines 5 and 7).

g) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "330" (see page 20 line 28).

h) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "382" (see page 21 line 5).

i) The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "452-454" (see page 24 line 21).

j) In figure 6 blocks 250-252, it seems that the arrow lines from blocks 250-252 to sector #1-sector#3 information signals have the arrow in the opposite direction. Figure 6 is a receiver (see page 6 lines 27-29), so it seems that should receive signals.

k) The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "generating an In-phase component and a Quadrature component of the first summation signal; and generating an In-phase component and a Quadrature component of the second

summation signal" (see claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

a) The recitation in page 13 line 9 "FIG. 3" is improper, because paragraph in page 13 lines 9-19 is describing FIG. 2; it is suggested to be changed to "FIG. 2".

b) The recitation in page 19 line 2 "repeat" is improper; it is suggested to be changed to "repeats".

c) The recitation in page 21 lines 14-16 "local oscillator (LO) carrier frequency signals Cos(2dft) and Sin(2dft), respectively, to mixers 388 and 390, where they are mixed and provided to summer 392. The quadrature phase carrier signals Sin(2dft) and Cos(2dft) are provided from" seems to be improper; it is suggested to be changed to "local oscillator (LO) carrier frequency signals Cos(2πFT) and Sin(2πFT), respectively, to mixers 388 and 390, where they are mixed and provided to summer 392. The quadrature phase carrier signals Sin(2πFT) and Cos(2πFT) are provided from" (see figure 9 input to blocks 388 and 390).

d) The recitation in page 25 lines 10-11 "coverage areas C1-C3, while antenna panels 484 and 482 project 40-degree fixed-beams to coverage areas C4-C6, and C7-C9, respectively" seems to be improper; it is suggested to be changed to "coverage areas C1-C2 and C9, while antenna panels 484 and 482 project 40-degree fixed-beams to coverage areas C3-C5, and C6-C8, respectively" (see figure 14 blocks 480, 482 and 484).

e) The recitation in page 25 line 17 "482-484" seems to be improper; it is suggested to be changed to "480-484" (see figure 14 blocks 480, 482 and 484).

Appropriate correction is required.

The use of the trademark "Anzac Corp." has been noted in this application (see page 14 lines 22-23). It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Claim Objections

Claim 4 is objected to because of the following informalities: the recitation in lines 3-4 of claim 4 "summing a second of the multiple parts of the first signal with a second of the multiple parts of the second signal" is vague and indefinite because it is not clear what a second means; it is suggested to be changed to "summing a second part of the multiple parts of the first signal with a second part of the multiple parts of the second signal" (emphasis added). Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claim 5, claim 5 is rejected because the specification doesn't disclose "generating an In-phase component and a Quadrature component of the first

summation signal; and generating an In-phase component and a Quadrature component of the second summation signal".

As per claim 6, claim 6 is rejected because they depend directly from claim 5 and claim 5 is rejected.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 is rejected because the specification doesn't disclose "despreading the In-phase component and the Quadrature component of the first summation signal with the despreading code; offsetting the despreading code by a first phase delay to form a delayed despreading code; and despreading the In-phase component and the Quadrature component of the second summation signal with the delayed despreading code".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 3, claim 3 recites the limitation "summing one of the multiple parts of the first signal with one of the multiple parts of the second signal to form a first

summation signal" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

As per claims 4-6, claims 4-6 are rejected because they depend directly or indirectly from claim 3 and claim 3 is rejected.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US 5021801 A). Smith discloses a plurality of antenna elements, each antenna element associated with a coverage area of a wireless communication system (figure 2 block 220; column 2 lines 46-65); a plurality of receive amplifiers, each receive amplifier coupled to one of the plurality of antenna elements (figure 2 block 205; column 2 line 66 to column 3 line 6); a switch matrix coupled to the plurality of receive antennas (figure 2 block 203; column 2 lines 46-65); and a plurality of summation networks coupled to the switch matrix and adapted to receive information from each of the plurality of receive amplifiers (figure 2 block 204; column 2 line 66 to column 3 line 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

> the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meidan (US 5276907 A) in view of Schilling (US 5422908 A).

As per claim 1, Meidan discloses receiving a first signal from a first sector (abstract, figure 1 block 102; column 1 lines 15-29; column 7 lines 20-33); receiving a second signal from a second sector (abstract, figure 1 block 102; column 1 lines 15-29; column 7 lines 20-33). Meidan doesn't specifically disclose delaying the second signal to form a delayed second signal; and summing the delayed second signal and the first signal. Schilling discloses delaying the second signal to form a delayed second signal (figure 1 block 14; column 3 lines 37-48); and summing the delayed second signal and the first signal (figure 1 block 13; column 3 lines 54-63). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

As per claim 2, Meidan and Schilling disclose claim 1. Schilling also discloses splitting the first signal into multiple parts (figure 3 block 21 column 4 lines 49-63); and splitting the second signal into multiple parts (figure 3 block 22 column 4 lines 49-63). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would

have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

As per claim 3, Meidan and Schilling disclose claim 1. Schilling also discloses summing one of the multiple parts of the first signal with one of the multiple parts of the second signal to form a first summation signal (figure 3 block 29 column 5 lines 8-18). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

As per claim 4, Meidan and Schilling disclose claim 3. Schilling also discloses summing a second of the multiple parts of the first signal with a second of the multiple parts of the second signal to form a second summation signal (figure 3 block 30 column 5 lines 8-18). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

As per claim 5, Meidan and Schilling disclose claim 4. Schilling also discloses generating an In-phase component and a Quadrature component of the first summation signal; (figure 3 block 31 column 6 lines 30-37) and generating an In-phase component and a Quadrature component of the second summation signal (figure 3 block 31 column 6 lines 30-37). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

As per claim 7, Meidan discloses means for receiving a first signal from a first sector (abstract, figure 1 block 102; column 1 lines 15-29; column 7 lines 20-33); means for receiving a second signal from a second sector (abstract, figure 1 block 102; column 1 lines 15-29; column 7 lines 20-33). Meidan doesn't specifically disclose means for delaying the second signal to form a delayed second signal; and means for summing the delayed second signal and the first signal. Schilling discloses means for delaying the second signal to form a delayed second signal (figure 1 block 14; column 3 lines 37-48); and means for summing the delayed second signal and the first signal (figure 1 block 13; column 3 lines 54-63). Meidan and Schilling are analogous art because they are from the same field of endeavor of spread spectrum communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the receiver disclosed by Meidan phased array spread-spectrum system

disclosed by Schilling. The suggestion/motivation for doing so would have been to maximizing signal strength of a spread-spectrum (Schilling abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
06-15-2006

TEMESGHEN GHAYOUR
PRIMARY EXAMINER